

AMENDMENTS TO THE CLAIMS

Upon entry of the present amendment, the status of the claims will be as shown below.

This listing of the claims replaces all previous versions and listings of the claims in the present application.

Listing of Claims

1. – 23. (Cancelled)

24. (Currently Amended) The circuit substrate production method according to claim 45 ~~[[23]]~~, wherein information is recorded as a two-dimensional code on the information recording portions.

25. (Currently Amended) The circuit substrate production method according to claim 45 ~~[[23]]~~, wherein, ~~in addition to the identification information of each of the substrates themselves,~~ information related to ~~[[a]] production step~~ at the substrate manufacturer and information related to ~~[[a]] production step~~ at the mounting manufacturer are recorded on the information recording portions at the substrate manufacturer.

26. (Cancelled)

27. (Currently Amended) The circuit substrate production method according to claim 46 ~~[[26]]~~, wherein, at the mounting manufacturer, substrate mounting is performed ~~on the substrate,~~ ~~which has information about a production step at the mounting manufacturer recorded on the~~ information recording portions ~~at the substrate manufacturer in addition to the identification~~

~~information about each of the substrates themselves~~, based on ~~[[the]]~~ information which is read from the information recording portions and is related to ~~[[the]]~~ mounting manufacturer production step.

28. (Currently Amended) The circuit substrate production method according to claim 45 ~~[[23]]~~, wherein substrate production step information ~~about each of the substrates~~ and the identification information read from the information recording portions are combined ~~in the substrate manufacturer and the mounting manufacturer~~, are transmitted to a data processing center connected via a communication network, and are data-processed in the data processing center to thereby construct various databases, and wherein the substrate manufacturer and the mounting manufacturer perform required processing by retrieving required data from the databases via the communication network.

29. (Currently Amended) The circuit substrate production method according to claim 46 ~~[[26]]~~, wherein substrate production step information ~~about each of the substrates~~ and ~~[[the]]~~ identification information read from the information recording portions are combined ~~in the substrate manufacturer and the mounting manufacturer~~, are transmitted to a data processing center connected via a communication network, and are data-processed in the data processing center to thereby construct various databases, and wherein the substrate manufacturer and the mounting manufacturer perform required processing by retrieving required data from the databases via the communication network.

30. (Previously Presented) The circuit substrate production method according to claim 28, wherein the databases contain information about production histories at both the substrate manufacturer and the mounting manufacturer.

31. (Cancelled)

32. (Currently Amended) The circuit substrate production system according to claim 47 ~~[[31]]~~, wherein the recorder ~~recording means in the substrate manufacturer~~ is configured such that, ~~in addition to the identification information of each of the substrates themselves,~~ information about a production step in the substrate manufacturer production information and information about a production step in the mounting manufacturer production information are recorded on the information recording portions.

33. (Currently Amended) The circuit substrate production system according to claim ~~[[31]]~~ 47, further comprising a data processing center which is connected to the substrate manufacturer and the mounting manufacturer via a communication network and processes data transmitted from the substrate manufacturer and the mounting manufacturer to thereby construct various databases, wherein a reader ~~read-out means~~ and a data processor-transmitter-receiver ~~processing-transmitting-receiving means~~ are provided in the substrate manufacturer and the mounting manufacturer, the reader ~~read-out means~~ reading out ~~[[the]]~~ identification information recorded on the information recording portions ~~of each of the substrates~~, the data processor-transmitter-receiver ~~processing-transmitting-receiving means~~ combining and transmitting production step information about each of the substrates in the substrate manufacturer and the

mounting manufacturer and the identification information ~~to transmit~~ to the data processing center and receiving required data from the data processing center.

34. (Cancelled)

35. (Currently Amended) The multi-piece substrate according to claim 48 [[34]], wherein production histories at both the substrate manufacturer and the mounting manufacturer are recorded on the information recording portions.

36. (Currently Amended) The multi-piece substrate according to claim 48 [[34]], wherein, ~~in addition to individual information of the substrates themselves, information required in a production step at the~~ substrate manufacturer production information and information required in a production step at the mounting manufacturer production information are recorded on the information recording portions.

37. (Cancelled)

38. (Currently Amended) The circuit substrate according to claim 49 [[37]], wherein, ~~in addition to the identification information of the substrate itself, information required in a production step at a~~ substrate manufacturer production information and information required in a production step at a mounting manufacturer production information are recorded on the information recording portion.

39. (Cancelled)

40. (Currently Amended) The circuit substrate production method according to claim 50 [[39]], wherein information about production histories at both the substrate manufacturer and the mounting manufacturer is contained in the databases.

41. (Currently Amended) The circuit substrate production method according to claim 50 [[39]], wherein information which is retrieved by the substrate manufacturer and the mounting manufacturer via the communication network and is required when required processing is performed is contained in the databases.

42. – 44. (Cancelled)

45. (New) A circuit substrate production method in which a substrate produced by a substrate manufacturer is delivered to a subsequent mounting manufacturer for mounting a component on the substrate by the mounting manufacturer to thereby produce a circuit substrate, comprising:

producing a multi-piece substrate comprising a plurality of substrate sheets, with each substrate sheet comprising a plurality of substrate pieces, wherein the multi-piece substrate is configured to be separated at one or each of a plurality of separation levels;

configuring the multi-piece substrate to include an information recording portion that includes information related to the entire multi-piece substrate, wherein each substrate sheet is

configured with an information recording portion that includes information related to the entire multi-piece substrate and information related to the identification of the substrate sheet, and wherein each substrate piece is configured with an information recording portion that includes information related to the entire multi-piece substrate, information related to a substrate sheet, and information related to the identification of the substrate piece;

recording on the information recording portions referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer; and

delivering the multi-piece substrate board to the mounting manufacturer.

46. (New) A circuit substrate production method in which, at a mounting manufacturer, a component is mounted on a substrate, which is produced by a substrate manufacturer and is delivered to the mounting manufacturer to produce a circuit substrate, comprising:

producing, at the substrate manufacturer, a multi-piece substrate comprising a plurality of substrate sheets, with each substrate sheet comprising a plurality of substrate pieces, wherein the multi-piece substrate is configured to be separated at one or each of a plurality of separation levels;

configuring, at the substrate manufacturer, the multi-piece substrate to include an information recording portion that includes information related to the entire multi-piece substrate, wherein each substrate sheet is configured with an information recording portion that includes information related to the entire multi-piece substrate and information related to the identification of the substrate sheet, and wherein each substrate piece is configured with an

information recording portion that includes information related to the entire multi-piece substrate, information related to a substrate sheet, and information related to the identification of the substrate piece;

recording, at the substrate manufacturer, on the information recording portions referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer;

delivering the multi-piece substrate to the mounting manufacturer; and

recording, at the mounting manufacturer, mounting manufacturer identification information.

47. (New) A circuit substrate production system in which a multi-piece substrate comprises a plurality of substrate sheets, with each substrate sheet comprising a plurality of substrate pieces, wherein the multi-piece substrate is configured to be separated at one or each of a plurality of separation levels, is produced at a substrate manufacturer, the multi-piece substrate produced at the substrate manufacturer being delivered to a subsequent mounting manufacturer, and in which an electronic component is mounted on a substrate piece, at the mounting manufacturer to thereby produce a circuit substrate, wherein:

the multi-piece substrate is configured to include an information recording portion that includes information related to the entire multi-piece substrate, wherein each substrate sheet is configured with an information recording portion that includes information related to the entire multi-piece substrate and information related to the identification of the substrate sheet, and wherein each substrate piece is configured with an information recording portion that includes

information related to the entire multi-piece substrate, information related to a substrate sheet, and information related to the identification of the substrate piece;

the information recording portions include referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer;

a recorder, provided at the substrate manufacturer, that records the included information in the information recording portions; and

a reader, provided at the mounting manufacturer, that reads out information from the information recording portions.

48. (New) A multi-piece substrate having a plurality of substrate sheets, with each substrate sheet comprising a plurality of substrate pieces, wherein the multi-piece substrate is configured to be separated at one or each of a plurality of separation levels, wherein:

the multi-piece substrate is configured with an information recording portion that includes information related to the entire multi-piece substrate, wherein each substrate sheet is configured with an information recording portion that includes information related to the entire multi-piece substrate and information related to the identification of the substrate sheet, and wherein each substrate piece is configured with an information recording portion that includes information related to the entire multi-piece substrate, information related to a substrate sheet, and information related to the identification of the substrate piece; and

the information recording portions are configured with referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer.

49. (New) A circuit substrate which is formed by mounting a component on a substrate piece formed by separating a multi-piece substrate, into a plurality of substrate sheets, and further separating each substrate sheet into a plurality of substrate pieces, wherein the multi-piece substrate is configured to be separated at one or each of a plurality of separation levels, wherein:

an information recording portion provided in the circuit substrate is configured to include information related to the entire multi-piece substrate board, information related to a substrate sheet, and information related to the identification of the substrate piece mounted with the component; and

the information recording portion is configured with referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer.

50. (New) A circuit substrate production method, comprising:

transmitting production information and identification information from a substrate manufacturer and from a mounting manufacturer to a data processing center via a communication network;

data-processing a combination of the production information and the identification information in a data processing center to construct various databases;

wherein the production and the identification information from the substrate manufacturer includes information related to an entire multi-piece substrate, information related to one of a plurality of substrate sheets that comprise the multi-piece substrate, and information related to the identification of one of a plurality of substrate pieces that comprise the substrate sheet; and

wherein the identification information includes referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer.

51. (New) A circuit substrate production method in which a substrate produced by a substrate manufacturer is delivered to a subsequent mounting manufacturer for mounting a component at the mounting manufacturer to thereby produce a circuit substrate, wherein:

the substrate manufacturer records identification information on an information recording portion of the substrate, the information recording portion being configured with referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer, and

wherein the management and manufacturing information includes mounting manufacturer management information, substrate manufacturer management information, a manufacturing lot number, a total number of substrates included in a lot, a substrate sequence number, a substrate sheet code, and a substrate piece code.

52. (New) A circuit substrate production method in which a substrate produced by a substrate manufacturer is delivered to a subsequent mounting manufacturer for mounting a component at the mounting manufacturer to thereby produce a circuit substrate, comprising:

recording, by the substrate manufacturer, identification information on an information recording portion of a substrate, wherein the identification information includes referenceable management and manufacturing information related to the substrate manufacturer and the mounting manufacturer;

delivering the substrate to the mounting manufacturer;

reading and combining information related to the substrate and the identification information from the information recording portion;

transmitting the combined information to a data processing center connected via a communications network;

data-processing the combined information to construct various databases; and

retrieving required data from the various databases by the substrate manufacturer and the mounting manufacturer via the communication network in order to perform required processing.

53. (New) A circuit substrate, wherein:

an information recording portion is provided in the circuit substrate; and

identification information containing referenceable management and manufacturing information related to a substrate manufacturer and a mounting manufacturer is recorded on the information recording portion,

wherein the management and manufacturing information includes mounting manufacturer management information, substrate manufacturer management information, a manufacturing lot number, a total number of substrates included in a lot, a substrate sequence number, a substrate sheet code, and a substrate piece code.